October 2025

ENERGY MARKET Newsletter

ACIL ALLEN

Assessing the impact of energy efficiency policies and programs

by Marianne Lourey and Mayela Garcia

There are a range of well documented barriers that limit a consumer's ability to improve the energy performance of their homes – both in terms of the building fabric and the equipment used within them. These barriers relate to:

- **The inherent characteristics of energy efficiency investments**, which typically require an upfront initial capital outlay, while the associated savings accrue gradually over time and may be difficult to measure. Awareness of available energy efficiency options also tends to be low. In the case of rental properties, split incentives further inhibit action as property owners bear the costs of improvements, while tenants receive the financial and comfort benefits.
- **Behavioural factors**, including bounded rationality, which limits the extent to which consumers seek and process information about energy efficiency opportunities. Decision making is often influenced by non-economic factors, including loss aversion, whereby the immediate costs are perceived as more significant than future savings.

Governments have traditionally justified energy efficiency policies and programs on the grounds that they address market failures and deliver a net societal benefit – that is, society as a whole is better off as a result of these interventions.

However, as the energy system decarbonises, the traditional benefits of energy efficiency (the resource cost of the energy savings and the emissions reductions associated with those energy savings) are diminishing. The marginal value of each additional unit of energy saved has declined as renewable generation, which has low resource costs and is less emissions intensive, has become more prevalent. Recent assessments of energy efficiency policies and programs we have undertaken indicate that many now yield only modest net benefits, and in many cases, a net societal cost.

Despite this, energy efficiency improvements often deliver significant distributional benefits for those improving their homes. Where an energy efficiency policy or program appears to generate substantial net benefits,

this is frequently because these distributional benefits have been incorrectly characterised as societal benefits.

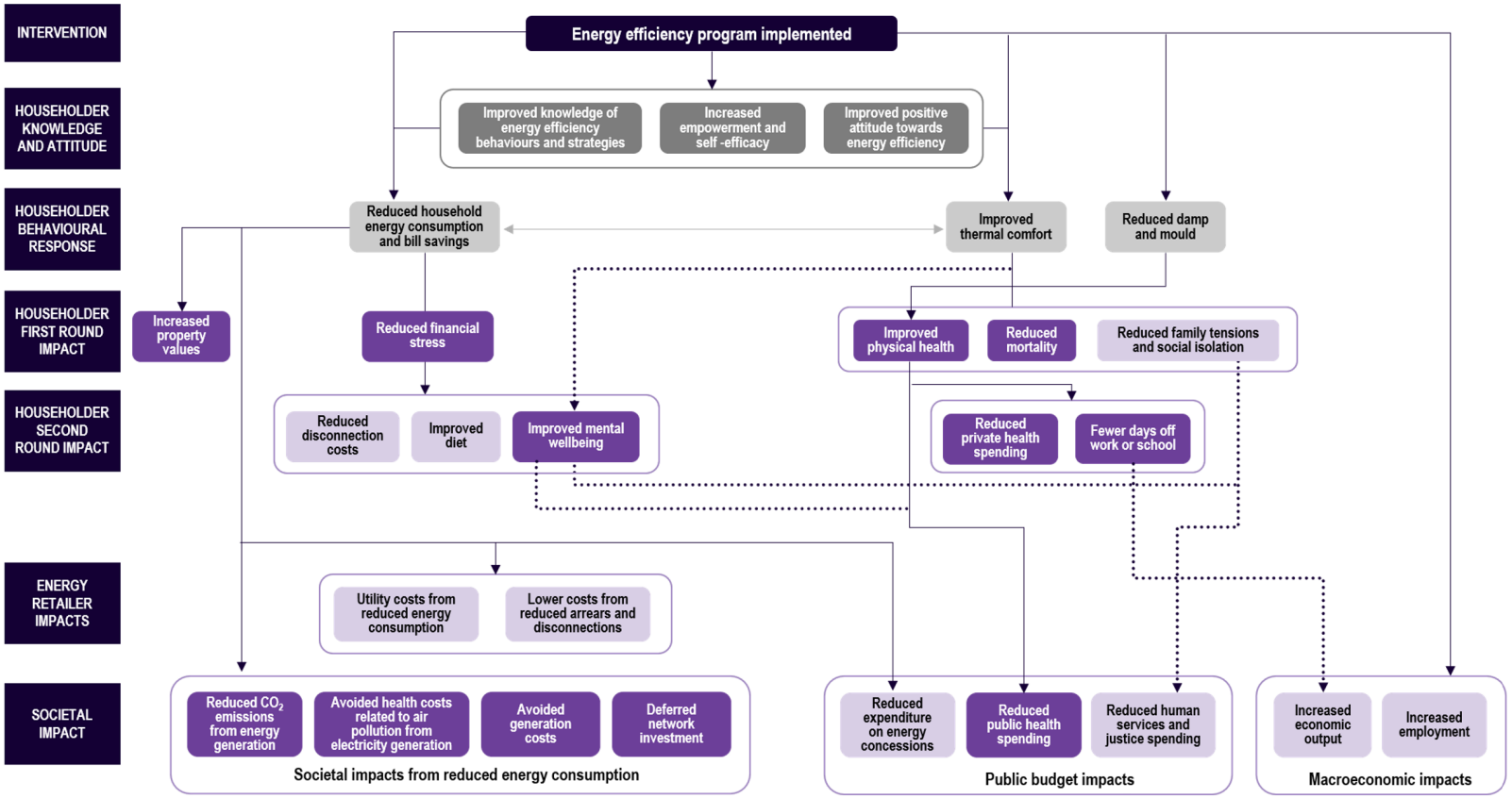
In 2017, we developed a Multiple Impacts Framework[1] for Energy Consumers Australia (see Figure 1) to provide a more comprehensive approach to assessing the impacts of energy efficiency initiatives. This framework recognises a wider range of impacts, including improved physical health and wellbeing, a reduction in disconnections, and reduced family tensions and social isolation.

As the energy transition progresses, this broader assessment framework is becoming increasingly relevant – not only in terms of broadening the types of benefits that can be considered when assessing energy efficiency policies and programs, but also in reframing the rationale for government intervention.

In the absence of significant societal benefits, the main justification for governments to develop and implement energy efficiency policies and programs lies in their potential to promote more equitable outcomes for energy consumers.

Ensuring a just transition requires that all consumers – including those with limited financial capacity – are able to benefit from a decarbonised energy system. Without targeted support, the gap between the 'haves' and 'have nots' will continue to widen, undermining both social equity and the broader objectives of the energy transition.

The Multiple Impacts Framework can be used to guide consideration of these more equitable outcomes.



1 ACIL Allen Consulting, *Multiple Impacts of Household Energy Efficiency: An Assessment Framework*, 25 October 2017.

Rethinking building energy efficiency in a decarbonising world

by Marianne Lourey and Mayela Garcia

Over the past decade, Australia has made significant progress in reducing emissions from the residential and commercial building sectors. Much of this achievement has been driven by the rapid decarbonisation of the electricity grid. With the growth of large-scale and small-scale renewable energy generation, the emissions intensity of the energy used in homes and workplaces has fallen sharply.

This success, however, requires a reassessment of where the next phase of policy effort should be focused and which tools will be most effective in driving further improvement.

As discussed above, the case for energy efficiency has traditionally rested on two pillars: reducing the resource cost of energy consumption and cutting greenhouse gas emissions. As the energy system continues to decarbonise, the marginal value of each additional unit of energy saved is declining. This does not diminish the importance of energy efficiency, rather, it calls for a more strategic and targeted approach to ensure continued impact and value for money.

One of the key implications of this changing context is the need to shift policy attention from new buildings to existing ones. Over the past two decades, Australia has made substantial progress in tightening the energy performance requirements for new construction. Today's new buildings are markedly more efficient than those built even a decade ago, with better insulation, glazing, and heating and cooling systems.

However, the potential for further cost-effective improvements through incremental increases in new building standards is diminishing. Each additional tightening of the standards becomes more expensive and yields smaller marginal gains. By contrast, the existing building stock, which constitutes most of Australia's homes and commercial premises, presents a far greater opportunity for meaningful and cost-effective reductions in energy use and emissions. For example, while new homes are generally built to a 6- or 7- star rating, homes built before 1990 have an average energy rating of 1.57 stars, those built between 1990 and 2005 have an average of 3.14 stars, and those built after 2005 have a minimum of 5 stars with the introduction of minimum standards at that time.[2]

Improving the performance of existing buildings is therefore essential to achieving Australia's long-term energy and climate goals. To do this efficiently, policymakers and markets require robust, consistent and comprehensive data on building energy performance which currently does not exist (particularly in the residential sector).

In this context, a national energy disclosure scheme would serve as a critical enabler for effective and efficient policy intervention in existing residential buildings. By requiring the disclosure of energy performance information at key transaction points (such as sale or lease) the scheme would introduce greater transparency into a market characterised by information asymmetry.

2 Sustainability Victoria (2010) (On-ground Assessment of the Energy Efficiency Potential of Victorian Homes) cited in Seongwon, S., Foliente, G. and Zhengen R. 2018, *Energy and GHG reductions considering embodied impacts of retrofitting existing dwelling stock in Greater Melbourne*, Journal of Cleaner Production 170, 1288-1304.

For consumers, disclosure would empower buyers and tenants to make more informed decisions about the comfort and operating costs of properties. For owners, it would provide valuable insights into how their buildings perform relative to peers and would highlight opportunities for improvement.

However, the true value of an energy disclosure scheme extends beyond its direct market impacts. The data generated through this scheme would enable, for the first time, the development of a comprehensive and representative picture of the energy performance of Australia's residential building stock, which would allow policymakers to:

- **Design more targeted government policies and programs.** With a clear understanding of where poor performing buildings are located and what factors drive inefficiency, resources can be directed where they will achieve the greatest impact.
- **Maximise the effectiveness of public expenditure.** Whether through rebates, grants, or concessional financing, government funding for energy efficiency can be focused on the worst performing homes and buildings, often those occupied by lower income households. This approach would enhance emissions reduction outcomes and addresses inequities in energy costs and comfort.
- **Support evidence-based regulation.** Disclosure data would provide the analytical foundation for developing and implementing minimum energy performance standards for existing buildings.
- **Enable private sector innovation.** Access to high-quality data can stimulate the creation of new financial products and services, including green mortgages, retrofit finance, and enhanced property valuation tools that recognise the value of efficient buildings.

It is important to note that energy disclosure, on its own, will not deliver the emissions reductions required from Australia's building stock. Rather, it represents a foundational reform – the first and essential step towards a more effective policy framework.

With detailed, representative data on building performance, governments can design interventions that deliver greater emissions reductions per dollar invested. At the same time, the private sector can leverage this information to develop solutions that meet growing demand for energy efficient and low emissions buildings.

WA's South West Interconnected System Transmission Plan

by Ryan Buckland

The Western Australian Government's latest view of the long term electricity transmission infrastructure needs for the South West Interconnected System (SWIS) was made public in the middle of September. The *South West Interconnected System Transmission Plan* goes beyond drawing lines on a map, and invites consideration of a truly-long term consideration of where, when, and how transmission infrastructure will be developed in the south west corner of the State to meet the needs of households and industry beyond the energy transition.

Transmission investment is hard. By its nature it is lumpy, costly, and requires careful planning and consideration to make sure investments are optimised to meet the needs of the grid today and well into the future. It has been a difficult space for industry and Government to navigate in recent years. There has been limited new large-scale transmission investment in the SWIS in the past decade, despite the pressing desires of all stakeholders for electrification as part of the decarbonisation of the Western Australian economy. The Clean Energy Link – North project had been in the works for a number of years, but ran into a range of hurdles from funding and pricing to corridor planning, and the interaction of this with the existing regulatory arrangements governing the electricity network in the State.

The *South West Interconnected System Transmission Plan* helps to provide more certainty by identifying 3 clear tranches of work to be done, bound by half-decade time horizons:

2025–2030

Phase 1: Facilitating Coal Retirement and Meeting Growing Industrial Demand

This is centred on projects with firm definition and sound economic justification, meeting immediate needs and providing the backbone for future investments. Clean Energy Link – North is the centrepiece of this phase, joined by major investments in the south around Collie and the Kwinana Industrial Area.

2030–2035

Phase 2: Economic Growth and Diversification

This is centred on projects designed to either firm up the network around the fringes of the Perth Metropolitan Area, or create new connections to prospective electricity generation areas (we don't call them Renewable Energy Zones in these parts!). These projects are somewhat defined, but require further investigations which are expected to begin in earnest.

2035 and beyond

Phase 3: Powering Global Decarbonisation

This is centred on the concept of incremental network expansion beyond the existing footprint to facilitate energy-intensive manufacturing at Western Australia's Strategic Industrial Areas, and to connect further sources of renewable electricity generation.

A well-attended industry briefing – so well attended, The Department of Energy and Economic Diversification and Energy Policy WA created a second show to satisfy demand – heard some of the detail sitting behind the PDF of the Plan, and the mountains of work that has gone into it. One particular matter piqued my interest, being the declaration that the "old" approach to funding transmission investment – through the regulatory system, and diffusion of costs across a Regulatory Asset Base – was unlikely to stand up to the task ahead in creating the necessary incentives and capital to build all of this kit. It feels like a recognition that a more direct funding model, where Western Power will be empowered to rely moreso on direct capital contributions and even private non-user capital, may be on the menu.

New IRSR Rules Finalised Ahead of First Transmission Loop

by Jonathan Ben-Tovim

The AEMC has finalised new inter-regional settlements residue (IRSR) arrangements to manage financial flows in transmission loops, a major reform ahead of Project EnergyConnect (PEC) creating the NEM's first transmission loop from July 2026.

The rule, which commenced on 2 October 2025, introduces a "netting off" approach to allocate positive and negative IRSR more efficiently. Instead of recovering negative residues from consumers on individual interconnector arms, the new framework pools IRSR across the loop based on "net trade." If the total is positive, residues are distributed to SRA unit holders; if negative, they're recovered from transmission businesses in proportion to regional demand.

A key benefit of the new approach is how it deals with negative IRSR on individual arms when the overall net IRSR remains positive, a frequent outcome under loop operation. Under the previous framework, TNSPs could face large, unpredictable liabilities on those arms, even when the overall loop was generating a settlement surplus. By netting off, these negative residues are offset against positive residues elsewhere in the loop, removing that cash flow risk from TNSPs and avoiding volatility in transmission charges passed through to customers.

ACIL Allen supported AEMO's work on this reform, modelling how the PEC transmission loop would change settlement outcomes and influence IRSR. This analysis helped inform AEMO's proposed rule change and the AEMC's assessment of different design options.

This marks the first major overhaul of IRSR arrangements in decades and sets the stage for future reforms to improve inter-regional hedging once operational data from the loop is available.

If you have any questions about how this rule change works or could impact your business, from settlement outcomes to inter-regional hedging strategies, feel free to get in touch with our team.